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ABSTRACT

This study investigated the effects of interactive video (IVD) instruction with embedded rules (production system rules) and practice with feedback on learners' academic achievement and perceived self efficacy in the domain of procedural knowledge for watching professional football. Subjects were 71 female volunteers from undergraduate education classes at the University of Connecticut, who were randomly assigned into four groups: (1) Practice Group; (2) Embedded Rules Group; (3) Combination (practice and embedded rules) Group; and (4) No IVD Lesson Group. Analysis of variance and covariance techniques were used to compare group differences on achievement and self efficacy perceptions. The results indicated that there were significant group differences on achievement and self efficacy. The combination group showed the highest scores on the achievement posttest and self-efficacy measures, whereas the no IVD group showed the lowest scores. It is concluded that learning complex procedural knowledge can be enhanced by practice and /or embedding rule statements into instruction. The combination of both practice and embedded rules showed the best learning. This effect is attributed to improved schema acquisition through the consolidation of clearly stated rules (e.g., the side with the tight end is the strong side) and practice identifying players, formations, and plays. In addition, the rules and video practice activities alone were not sufficient to enhance schema acquisition. A rich video context was needed in which to learn the heavily visual task of understanding professional football. Copies of the pre- and post-tests are appended. (24 references) (Author/DB)

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Multimedia Football Viewing: Embedded Rules, Practice, and Video Context in IVD Procedural Learning

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Abstract

This study investigated the effects of interactive videodisc (IVD) instruction with embedded rules (production system rules) and practice with feedback on learners' achievement and perceived self-efficacy in the domain of procedural knowledge for watching professional football. Subjects were 71 female volunteers from undergraduate Education classes at the University of Connecticut, who were randomly assigned into four groups: 1) Practice group, 2) Embedded Rules group, 3) Combination (practice and embedded rules) group, and 4) No IVD lesson group. Analysis of variance and covariance techniques were used to compare group differences on achievement and self-efficacy perceptions. The results indicated that there were significant group differences on achievement and self-efficacy. The combination group showed the highest scores on the achievement posttest and self-efficacy measures, whereas the no IVD group showed the lowest scores. It is concluded that learning complex procedural knowledge (such as how to knowledgeably watch and appreciate professional football) can be enhanced by practice and/or embedding rule statements into instruction. The combination of both practice and embedded rules showed the best learning. We attribute this effect to improved schema acquisition through the consolidation of clearly stated rules (e.g. the side with the tight end is the strong side) and practice identifying players, formations, and plays. In addition, the rules and video practice activities alone were not sufficient to enhance schema acquisition. A rich visual context was needed in which to learn the heavily visual task of understanding professional football.

Introduction

Interactive video has improved student performance in a wide variety of learning contexts (Harless, 1985), as well as learner motivation and attitudes toward instruction (Dalton, 1986). Research topics in Interactive Videodisc (IVD) learning include the degree of interactivity using both program control and learner control (Gay, 1986: Jonassen, 1985), individualization and cooperative learning (Dalton,1990), and monitoring of student progress (Yang, 1987). Cognitive integration is an important dimension of IVD learning that has received less attention.

Hannafin & Colamaio (1986) indicated that the certain types of activities (e.g., practice) in interactive video learning might be more important for learning facts and problem solving (declarative knowledge) than for procedural learning (procedural knowledge). Proceduralization is a fundamental learning process and as Anderson (1987) stated, the learning components for procedural knowledge are more complicated and various than for declarative knowledge. For example, when learning a foreign language, it is very difficult to apply the learned rules and to generate sentences, even though it is easy to spell out the words and interpret their meaning. Once fluency is gained, however, one forgets the rules of the foreign language as declarative knowledge is transformed into procedural knowledge. According to Anderson's (1990) production system model, there are three stages of skill acquisition. The first stage consists of memory for declarative facts relevant to a skill. In second stage, learners build a set of procedures specific to the skill domain. In the last stage, the autonomous stage,

procedures become more and more automated and rapid with practice. At this point, one can raise the question: are certain activities able to influence the development of procedural knowledge through IVD learning? The purpose of this study was to examine the role of embedded rules (production system rules) and practice with feedback on learners' achievement and self-efficacy perceptions in the domain of procedural knowledge for watching professional football.

Embedded Rules and Production System

Anderson (1982, 1987,1990) described the acquisition and improvement of procedural skills in terms of a production system theory that currently provides a popular theoretical approach to understanding learning (e.g., Klahr, Langley, & Neches, 1987). Neches, Langley, & Klahr (1987) claimed that learning is procedural and experiential. Production system models of learning provide an efficient way of storing information in a discrimination network that both reduces space requirements and speeds up the matching process. They indicated that the nature of both learning mechanisms and production systems can interact to satisfy several constraints (e.g., efficiency and adaptivity, granularity of rules, analyzability of rules) to which learning systems are subject. Although the idea of presenting embedded rules as a way of strengthening memory is not necessarily tied to the production system framework, production system theories provide the clearest descriptions of how embedding rules might impact learning, especially in the context of IVD learning.

According to the production system theory described by Anderson (1987), procedural skills are initially developed through the interpretation of declarative knowledge, and with continued interpretation, developed into another memory representation in the form of productions, goal and action rules. Such rules can be represented by simple If–Then statements; for example, a production rule for interpreting professional football might be, "If the tight end is on the right, then the right side of the line is the strong side." By embedding such rules within instruction, at the associated stage of skill acquisition (building a set of procedures specific to the domain), it is reasoned that the development of automated productions can be facilitated in the context of video instruction. It is also expected that embedded rules prompt learners to activate this stage more rapidly.

To facilitate procedural learning (in arithmetic), Ohlsson (1991) emphasized the role of conceptual understanding, which prompts learners to integrate concepts and principles of arithmetic along with arithmetic procedures. He indicated that without conceptual understanding, learned procedures would be error–prone, easily forgotten, and not transferrable to novel problem–solving situations. To explain how the construction of a procedure from its conceptual basics occurs, Ohlsson posits the State Constraint Theory (SCT) that explains the role of conceptual knowledge in procedural learning and the relation between understanding and performance. According to the theory, a procedure is just a set of dispositions to act in a certain way under certain

circumstances. The theory asserts that understanding is present when a procedure is executed in the context of the learner's principled knowledge. Thoughtful execution consists of matching the outcomes of the procedural steps against the concepts and principles of the relevant domain. The function of principled knowledge is to enable learners to catch and correct the mistakes that their procedures will unavoidably make when confronted with unfamiliar situations. The proceduralization mechanism in Anderson's model is similar to the SCT in that it translates declarative knowledge into procedural knowledge. In Anderson's model, however, declarative knowledge enters into the initial creation of a rule only, and plays no further role in its development. Declarative knowledge in the SCT, on the other hand, is equally active throughout the entire process of procedure development and application.

The procedural knowledge included in football watching mainly consists of predictions of football strategies. To predict defensive and/or offensive strategies, some facts and concepts (declarative knowledge) need to be stored in memory. To watch professional football successfully, the viewer should be able to read defensive and offensive strategies in advance and predict the strategy of the teams based on the players' movements. In learning to interpret football strategies, declarative knowledge acts throughout the process of construction of procedural rules as Ohlsson indicated, since a better understanding of football strategies is associated with knowledge of the facts, concepts, and principles of football. We believe that learner actiities such as practice,

video context, and embedded rules will facilitate this process.

Although there are often competing interpretations about each player's movements in certain formations, many plays are given by players' locations and running directions. Therefore, under certain conditions, certain actions are expected, and sometimes decisions are made very quickly. Providing condition–action statements at the beginning of schema development for football strategies may effectively aid construction of production rules and help focus learners' attention on the information necessary to perform problem solving (for example, if the tailback and the fullback are lined up parallel to each other, then the offensive team is in a split–formation, often used for passing).

Like many complex real–world tasks, watching professional football does not contain purely procedural knowledge even after skill acquisition is completed. The prediction of football strategies includes interpretation of complex situations, the formations, player recognition and analysis of past team tedencies. The more declarative knowledge one has about a certain formation, the better one's predictions will be. Therefore, although the procedural knowledge contained in watching professional football mostly reflects Anderson's production system model, Ohlsson's assertion that declarative knowledge continuously evaluates procedural knowledge is also critical to our analysis of this task.

Practice in IVD learning

Reseach on practice in both Computer–Based Instruction (CBI) and IVD learning

has focused on the use of embedded, or adjunct questions (Phillips, Hannafin, & Tripp, 1988; Hannafin, Phillips, & Tripp, 1986). In these studies, embedded practice questions included facts and applications in IVD learning of the information on the videodisc, the National Gallery of Art. The effect of practice was found to be most important for factual information. Adjunct questions also influenced what was learned. According to Allen (1986), adjunct questions in IVD learning improved the attainment of specified learning outcomes by systematically directing learner attention, providing opportunities to respond to criterion questions related to lesson concepts, and otherwise providing methods of responding to and elaborating on important lesson content. However, Hannafin & Colamaio (1986) indicated that the influence of practice in IVD was more important for the learning of declarative knowledge and problem solving skills, than for procedural learning.

Bagget (1988) examined the role of practice in the construction of an 80-piece "lift" model, under six experimental conditions: 1) passive videotape; 2) interactive with practice; 3) interactive without practice; 4) interactive with practice when screen black; 5) interactive with practice--seven day delay between training and test; and 6) interactive without practice-- seven day delay. This study found IVD with practice no better than video alone. She concluded that to be more effective, practice must be sequential or extensive.

According to Gagne & Glaser (1987), practice has its effect only when each

repetition of the learned association is carried out with due provision for systematic contiguity and reinforcement. Under these conditions, practice has a substantial influence on learning. The effects of practice on procedural knowledge appear when practice takes the form of making repeated application of a rule to a number of different previously unencountered examples. However, simply repeating execution of the same sequence of a learning task in the same context does not lead to gains in the "strength" of a learned rule (Gagne & Glaser, 1987). In the present study, opportunities for practice were given with each component of the 45 minute lesson, and learners received immediate feedback on their performance.

Self-Efficacy

According to Bandura (1977), individuals' efficacy expectations about specific behaviors will influence their decision to perform or not to perform those behavior. Self-efficacy represents a variable intervening between a cognitive process (knowledge) and behavior (action and/or accomplishment). Bandura (1982) also indicated that the more efficacious learners perceived themselves to be, the more likely they were to invest sustained effort in a task and persist in doing so. Salomon (1984) explained that characteristics of the task, material, and context are related to learners' perceived self-efficacy, which in turn influences learning.

Campbell & Hackett (1986) found that task success led to an increase in self-efficacy expectations, while task failure led to a corresponding drop in both level

and strength of task self-efficacy. Another study by Hackett & Campbell (1987) also found that task performance influenced ratings of task self-efficacy and global verbal ability, with successful learners increasing their self-efficacy and ability ratings with regard to the experimental task and unsuccessful learners decreasing these same things. These studies support that self-efficacy contributes to the prediction of performance and long-term learning success.

In a study examining the role of interactivity and self-efficacy on a procedural task, Garry, Shyu, Kim, & Brown (1991) found that there were significant correlations between pre test self-efficacy and achievement, and between change in self-efficacy and achievement. This study showed that in certain instructional situations, self-efficacy plays an important role as a predictor of success or failure of achievement. The present study looks for self-efficacy as a predictor for improved achievement if students were to continue instruction under treatment condition beyond the 45-minute intervention.

Again, the purpose of this study was to examine the effects of practice questions with feedback and embedded rules (IF-THEN statements) on learning how to watch professional football (not how to play professional football) through an interactive video lesson.

Methodology

Subjects were 71 female volunteers undergraduates a large Northeastern university. Only females were selected to assist in controling prior football knowledge and

experience. The treatment randomly assigned each subject to one of four groups: 1) Practice group,

2) Embedded Rules group, 3) Combination (practice and embedded rules) group, and 4) No IVD lesson group. The video material was "How to watch professional football" (Optical Programming Associates, 1980) on videodisc made interactive using a Macintosh computer and HyperCard® software.

All participants first completed a written and video pretest (maximum score 12) on football knowledge subsequently used as a covariate (see Appendix A for written portion) and a self-efficacy scale. The self-efficacy scale consisted of items about understanding pro football strategies with a 5-point self-report response scale (where 5=very high self-efficacy, 1=very low self-efficacy, see Appendix B). The practice group received 45 minutes of instruction in 5 units, each followed by two or three video-based questions about the contents of that unit. The embedded rules group received the same instruction, but with rule statements (IF-THEN statements) summarizing the contents at the end of each unit. For example, if the offensive team has a guard, tackle, and tightend on the left side of the formation, then this is the strongside, favored for running plays. The combination group received the same instruction, with both rule statements and practice questions following each of five instructional units. The no-IVD group did not receive the videodisc-based instruction; rather, they completed the video practice questions and viewed the rule statements for each unit. Every subject received

45 minutes to complete the treatment. Posttesting consisted of a re-administration of the self-efficacy scale and a second football knowledge test (with 25% of the items repeated from the pretest, maximum score 12).

The dependent variables in this study were learners' achieved level of procedural learning and their self-confidence under the four treatment conditions--embedded rules, practice with feedback, combination of embedded rules and practice, and no interactive video lesson.

Analysis of Covariance (ANCOVA) and the Tukey method were used to compare group differences with the pretest score as covariate. Analysis of Variance (ANOVA) and the Tukey method were also employed to see whether each treatment showed different self-efficacy perceptions under the various treatment conditions.

Results

To see group differences on the knowledge pretest and posttest, mean scores of each group were compared. Figure 1 indicates that the pretest scores of the four groups were not much different from each other, even though posttest score showed a difference based on treatment.

Insert Figure 1 Here

Table 1 shows the ANCOVA results of the achievement posttest for football knowledge. There was a significant main effect for treatment on the posttest (F (3,66) = 7.87, $p < .001$); whereas, the effect of the pretest was not significant as a covariate.

Insert Table 1 Here

Table 2 shows the Tukey tests on the post knowledge test by treatments. The results show that the no IVD lesson group (M =4.53, SD= 1.97) was significantly different from the practice group (M = 6.59, SD= 1.84), the embedded rules group (M = 7.39, SD= 2.03), and the combination group (M =7.58, SD= 2.20).

Insert Table 2 Here

Table 3 shows the Tukey tests on self-efficacy by group. The results showed an effect for treatment on perceived self-efficacy (F = 6.53 (3,67), $p < .001$). Also the results indicated the same pattern as the achievement posttest, with the practice group (M = 2.06, SD= .90), embedded rules group (M = 2.39, SD= .85), and combination group (M = 2.63, SD= .83) superior to the no IVD group (M = 1.47, SD= .72). While not significantly different from the other reatment conditions, the combination group

showed the highest achievement and self-efficacy scores among the groups.

Insert Table 3 Here

Discussion

The purpose of this study was to examine the effects of practice with feedback and embedded rules on learners' knowledge achievement and perceived self-efficacy in learning to watch professional football using IVD learning. As predicted, learners' achievement and self-efficacy were influenced by different treatments. Although the practice and embedded rules groups were not significantly different from each other, the combination group's highest scores on achievement and self-efficacy suggest that learners received the advantages from both practice with feedback and embedded rules. As Klahr, Langley, & Neches stated (1987), the higher post test knowledge score shown in the embedded rules group suggested that of production systems in a learning context can provide certain advantages to the learners. The lower achievement and self-efficacy in the no IVD lesson group reflect the importance of visual and contextual information in schema acquisition, specially in procedural knowledge. The low performance of the no IVD group also suggests that systematic instruction (other groups in this study received fully explained football strategies through IVD) is needed when subject matter requires procedural learning (e.g., names of football players, their roles in the formation, and

prediction of strategies).

As Bandura (1986) indicated, behavior is influenced by individuals' efficacy expectations. Self-efficacy in this study showed the same pattern of results as football knowledge achievement. The higher self-efficacy shown by treatment groups suggests that longer term IVD instruction would be effective in learning to watch professional football.

In conclusion, learning complex procedural knowledge such as the plays and formations of professional football, can be enhanced both by practice recognizing these events and by providing embedded rules for recognizing these events. Further, the performance of the combined treatment group, although not significantly better, suggests the effects of embedded rules and practice may be synergistic.

Further research in this area should consider several important implications of the present study. First, practice questions and embedded rules could be expanded for more complete coverage of the instructional content--this study provided only two or three practice questions and embedded rule statements for each unit, and instruction only lasted lasted 45 minutes. Second, there must be instruction on basic football conceptual knowledge that can facilitate learnings and the subsequent interpretation and analysis of football strategies as suggested by Ohlsson (1991). For example, many of our female participants reported being frustrated while they learned because of a lack of basic football knowledge. This may be a future application of multimedia instruction that can

improve learners' performance on general problem-solving. Finally, our research reinforces a need for future studies of the long-term effects of cognitive processing in IVD learning, specially in a complicated procedural learning context such as football watching. The true test of successful procedural learning will be transfer of learned knowledge to novel real world problem situations (for example, watching Monday night football and the Super Bowl).

References

Allen, B. (1986). A theoretical framework for interactivating linear video. Journal of Computer-Based Instruction. 13, 236-253.

Anderson, J. (1982). Acquisition of cognitive skill. Psychological Review, 89, 369-406.

Anderson, J. (1987). Skill acquisition: Compilation of weak-method problem solutions, Psychological Review, 94, 192-210.

Anderson, J. (1990). Cognitive Psychology and its implications. N.Y.: W.H. Freeman & Company.

Bagget, P.(1988). The role of practice in video-disc-based procedural instruction. Educational Technology Reports. (1), 1-36.

Bandura, A.(1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

Bandura, A.(1982). Self-efficacy mechanism in human agency. American Psychologist. 37, 122-147.

Bandura, A. (1986). Social foundations of thought and action. Englewood Cliffes, NJ: Prentice-Hall.

Campbell, N.E., & Hackette, G. (1986). The effects of mathematics task performance on math self-efficacy and task interest. Journal of Vocational Behavior. 28, 149-162.

Dalton, D. W. (1986). The efficacy of computer-assisted video instruction on rule learning and attitudes. Journal of Computer-Based Instruction. 13, 122-125.

Dalton, D. W. (1990). The effects of cooperative learning strategies on achievement and attitudes during interactive video. Journal of Computer-Based Instruction, 17, 8-16.

Gagne, R.M., & Glaser, R. (1987). Foundations in learning research. In R. M. Gagne (Ed.). Instructional Technology: Foundations. Hillsdale, NJ: Lawrence Erlbaum Associates.

Garry, M., Shyu, H-Y., Kim, E., & Brown, S.W. (1991). Examining the role of interactivity, practice, and self-efficacy on a procedural task: Making a paper-folded crane. Paper presented at the Annual Convention of the American Educational Research Association at Chicago, IL.

Gay, G. (1986). Interaction of learner control and prior understanding in computer-assisted video instruction. Journal of Educational Psychology, 78, 225-227.

Hackett, G., & Campbell, N.K. (1987). Task self-efficacy and task interest as a function of performance on a gender-neutral task. Journal of Vocational Behavior, 30, 203-215.

Hannafin, M.J., & Colamaio, M. (1986). The effects of locus of instructional control and practice on learning from interactive video. Paper presented at the annual meeting of the Association for the Development of Computer-based Instruction System, Washington,D.C.

Hannafin, M.J., Phillips, T.L., & Tripp, S.V. (1986). The effects of orienting, processing, and practicing activities on learning from interactive video. Journal of Computer-Based Instruction, 13, 134-139.

Harless, W. (1985). The time project. Paper presented at the annual meeting of the association for the Development of Computer-Based-Instructional System, Philadelphia.

Jonassen, D. H. (1985). Interactive lesson design: A taxanomy. Educational Technology. 25,7-17.

Klahr, D., Langley, P., & Neches, R. (Eds.) (1987). Production system models of learning & development, Cambridge, MA: MIT press.

Neches, R., Langley, P., & Klahr, D. (1987). Learning, Development, and Production systems. In D. Klahr, P. Langley, and R. Neches (Eds.). Production system models of learning and development. Cambridge, MA: MIT Press.

Ohlsson, S. (1991). The function of conceptual understanding in the learning of arithmetic procedures. Cognition and Instruction, 8, 103-179.

Phillips, T.L., Hannafin, M.J., Tripp, S.V. (1988). The effects of practice and orienting activities on learning from interactive video. Educational Communication and Technology Journal, 36, 93-102.

Salomon, G. (1984). Television in "easy" and print is "tough": The differential investment of mental effort in learning as a function of perceptions and attributions. Journal of Educational Psychology, 76, 647-658.

Yang, Jung-shing (1987). Individualizing instruction through intelligent computer-assisted instruction: A perspective. Educational Technology, 27, 7-15.

Table 1

The effect of treatment on post knowledge test with pretest as a covariate

Source	SS	DF	MS	F	P
Treatment	96.679	3	32.226	7.87	.0001
Pretest (Cov.)	2.969	1	2.969	.72	.398
Error	270.294	66	4.095		

Table 2

The effect for treatment on post knowledge test with Tukey method

Group	Mean	Size	G1	G2	G3	G4
G1	6.59	17				*
G2	7.39	18				**
G3	7.58	19				**
G4	4.53	17	*	**	**	

G1 = Practice group
G2 = Embedded rules group
G3 = Combination group
G4 = No-IVD group

* = $p < .05$
** = $p < .01$

Table 3

The effects for treatment on perceived self-efficacy

ANOVA

Source	SS	DF	MS	F	P
Group	8.4136	3	2.8045	6.03	.001
Error	31.1669	67	.4652		

Tukey Method

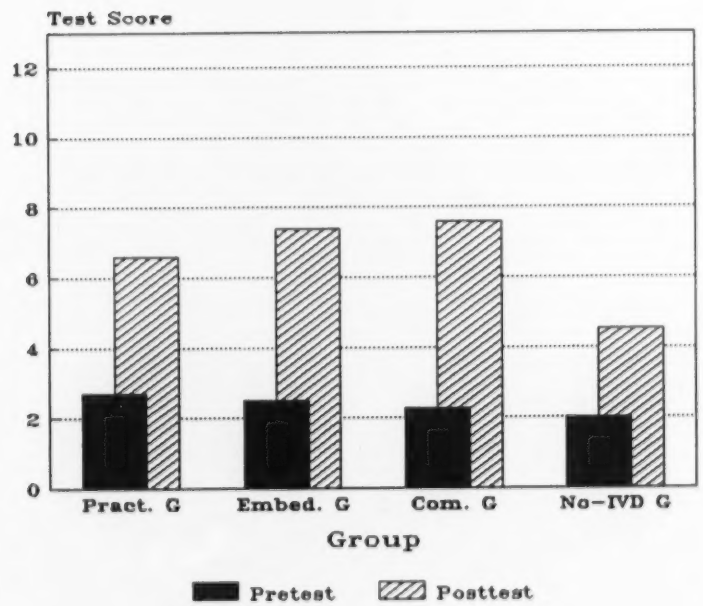
Group	Mean	Size	G1	G2	G3	G4
G1	2.23	17				
G2	2.30	18				*
G3	2.64	19				**
G4	1.68	17		*	**	

G1 = Practice group
G2 = Embedded rules group
G3 = Combination group
G4 = No-IVD group

* = $p < .05$
** = $p < .01$

Figure 1

Comparison of group difference on post and pre knowledge test



APPENDIX A

Written Test

The following questions ask about your knowledge of pro football strategies. Please fill out the blanks.

1. To run to the weak side from an offensive formation you must use ( ) blocking.

2. The 3-4 defense has ( ) linebackers.

3. ( ) is the primary focus of the Blitz.

4. Most times, goal line defenses commit themselves to the ( ).

APPENDIX B

Self-Efficacy Test

The following questions ask about your confidence in understanding of pro football strategies. Please circle the number that best represents your confidence.

1----------2----------3----------4----------5
(Very little) <----------**CONFIDENCE**----------> (Quite a lot)

****

1. Distinguishing 3-4/4-3 Defense:	1	2	3	4	5
2. Distinguishing Defense strategies such as gap defense and reading defense:	1	2	3	4	5
3. Distinguishing Pass Rush strategies such as tackle-tackle, tackle-end, & end-tackle:	1	2	3	4	5
4. Distinguishing Offensive Formations strategies such as the pro-set, the split formation, and the I-formation:	1	2	3	4	5
5. Distinguishing Goal Line Offense strategies:	1	2	3	4	5
6. Distinguishing Goal Line Defense Alignments:	1	2	3	4	5
7. Deciding when 3-4/4-3 Defense is the appropriate strategy:	1	2	3	4	5
8. Deciding when Defense strategies such as gap defense and reading defense are the appropriate strategy:	1	2	3	4	5
9. Deciding when Pass Rush strategies such as tackle-tackle, tackle-end, & end-tackle are appropriate:	1	2	3	4	5
10. Deciding when Offensive Formation strategies such as the pro-set, the split formation, and the I-formation are appropriate:	1	2	3	4	5
11. Deciding when Goal Line Offense strategies are the appropriate strategy:	1	2	3	4	5
12. Deciding when Goal Line Defense Alignment strategies are the appropriate strategy:	1	2	3	4	5